

Projected Outcomes of an Expanded Role for Pharmacists in Publicly Funded Immunization Services in New Brunswick

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Introduction

In New Brunswick, pharmacy professionals can administer a wide range of immunizations to patients. Many vaccines in NB are publicly funded when administered by a physician or nurse practitioner, however, the majority of these vaccines are not publicly funded when administered by pharmacy professionals. Currently, only the influenza and COVID-19 vaccines are publicly funded when administered by pharmacy professionals in NB. This creates a scenario in which patients wishing to take advantage of the accessibility offered by pharmacy-based vaccination services must pay for most vaccinations out of pocket, even when, in the case of publicly funded vaccines, these same vaccinations are available through a physician at no cost to the patient. This situation presents a barrier to accessible health services, particularly for residents who do not have access to a primary care provider, and a missed opportunity to take advantage of the full scope of practice of NB's pharmacy professionals.

Objective

To understand how expanding the number of publicly-funded vaccines pharmacy professionals can administer would impact provincial health care costs, access to care, and health outcomes for New Brunswick.

Hypothesis

By expanding the repertoire of publicly funded vaccinations that can be administered by pharmacy professionals, cost savings, improved health outcomes, and improved access to care may be realized in New Brunswick.

Methods

Pneumococcal polysaccharide (Pneu23) vaccine and tetanus-diphtheria/tetanus-diphtheria-acellular pertussis (Td/Tdap) boosters were selected as candidates for analysis owing to the ease of assessment for vaccine eligibility in a community pharmacy setting and the large size of the eligible populations. Using NB Physician Billing data accessed through NB-IRDT and relevant literature, we modelled two scenarios set in the year 2023: 1) Physician-only model - Publicly-funded Pneu23 vaccine and Td/Tdap boosters continue to be available through physicians/nurse practitioners but not through pharmacy professionals (current situation in NB). 2) Blended model - Publicly-funded Pneu23 vaccine and Td/Tdap boosters are available through physicians/nurse practitioners and pharmacy professionals. To analyze the impact of adding Pneu23 and Td/Tdap to the repertoire of publicly funded vaccines available through pharmacy professionals, we examined provincial spending, access to care, and health outcomes under both the Physician-only and the Blended models.

Results

Including Pneu23 and Td/Tdap to the repertoire of publicly funded vaccines administered by pharmacy professionals is estimated to produce an annual cost savings of \$1.5 million for the province; to increase the number of vaccinations against pneumonia and tetanus/diphtheria/pertussis by 1057 and 1485 individuals annually, respectively; to save 2114 hours of physician time annually; to permit the rostering of 2676 new patients with family physicians; and to avoid 1.56 costly hospitalizations due to pneumonia annually among individuals age 65+.

Cost Description	Cost differential under Blended Model (compared to Physician-only Model) (\$)
Vaccine acquisition costs	-49,128.46
Vaccine administration service costs	-19,404.27
Health system cost savings due to increased patient rostering with family physicians	1,303,533.12
Health system costs savings due to pneumonia hospitalizations avoided	16,281.10
Productivity losses avoided due to time off work to be vaccinated	267,966.80
Productivity losses avoided due to time off work due to illness	62.14
Estimated total annual cost savings for province of NB under Blended model	\$1,519,310.43

Table 1. Cost outcomes for province of New Brunswick in Blended model compared to Physician-only model

Discussion

Because pharmacies are accessible to the public, higher uptake rates are expected for both the Pneu23 vaccine and Td/Tdap boosters with the blended model, especially in rural communities with lower immunization rates and less access to primary care. As a result, more residents will be protected against these diseases, reducing costly hospitalizations and productivity loss due to illness. If pharmacy professionals administer the majority of these immunizations, additional availability would be made for physicians to roster new patients, resulting in health system savings and better access to family doctors in NB.